CLAIMS:

1. A multicast communication method of allowing a communication control apparatus for performing communication in accordance with an Internet protocol version 4 (IPv4) to communicate with a communication control apparatus for performing communication in accordance with an Internet protocol version 6 (IPv6), comprising the steps of:

when an IPv4 multicast packet is inputted, discriminating that said packet is a data packet on the basis of its IPv4 header;

when it is determined that said packet is the data packet, converting the IPv4 header of the IPv4 multicast packet into an IPv6 header and generating an IPv6 multicast packet; and

outputting the generated IPv6 multicast packet to an IPv6 network.

2. A method according to claim 1, further comprising:

when an IPv4-compatible multicast control packet (IGMP packet) is inputted, discriminating that said packet is an IGMP packet of a request for multicast group subscription on the basis of an IGMP header;

when it is determined that the packet is the IGMP packet of the request for multicast group subscription, translating the IGMP packet and generating an IPv6-compatible multicast control packet

(MLD packet);

registering correspondence information between an IPv4 multicast address and an IPv6 multicast address; and

outputting the MLD packet to the IPv6 network.

3. A method according to claim 2, further comprising the step of translating an MLD packet which is outputted from another communication control apparatus including an IPv6 multicast router into the IGMP packet.

4. A method according to claim 1, further comprising the steps of:

receiving an IPv6 multicast data packet from the IPv6 network and discriminating whether an IPv6 address has been registered or not;

converting the IPv6 header of the IPv6 multicast data packet into the IPv4 header if the IPv6 address has been registered and generating an IPv4 multicast data packet; and

outputting the generated IPv4 multicast data packet.

5. A method of establishing multicast communication between an IPv4 host connected to an IPv4 network and an IPv6 host connected to an IPv6 network in a translating apparatus connected to the IPv4 network and the IPv6 network, comprising the steps of:

receiving a packet which has been transmitted

from the IPv6 host and requests distribution of an IPv6 multicast packet from the IPv6 network;

translating the received packet into a packet for requesting distribution of an IPv4 multicast packet; and

outputting the translated packet to the IPv4 network.

6. A method according to claim 5, further comprising the steps of:

receiving a second packet which has been transmitted from the IPv4 host and requests distribution of the IPv4 multicast packet from the IPv4 network;

translating the received second packet into a third packet for requesting the distribution of the IPv6 multicast packet; and

outputting the translated third packet to the IPv6 network.